

CLAIMS

What is claimed is:

1. An error measuring device for optical disk drive mechanism to detect the assembly status of a spindle motor and two optical pickup head guide rods of an optical disk drive, the error measuring device comprising:
 - a spindle motor gauge, which is installed on top of the spindle motor to form a first measuring plane;
 - two gauges, including a referenced gauge and a guide rod actuated gauge, which stand freely on one side of the optical pickup head guide rods in a symmetric way, the guide rod actuated gauge forming a second measuring plane;
 - at least one first sensor, which is installed on the side of the referenced gauge corresponding to the first plane to measure the characteristic parameters of the first plane; and
 - at least one second sensor, which is installed on the side of the referenced gauge corresponding to the second plane to measure characteristic parameters of the second plane.
2. The error measuring device of claim 1 further comprising a first calibration module, which receives feedback control signals from the first sensor to adjust the assembly status of the spindle motor.
3. The error measuring device of claim 1 further comprising a second calibration module, which receives feedback control signals from the second sensor to adjust the assembly status of the optical pickup head guide rods.
4. The error measuring device of claim 1, wherein the characteristic parameters of the first plane includes a tilting angle.

5. The error measuring device of claim 1, wherein the characteristic parameters of the first plane includes a height.
6. The error measuring device of claim 1, wherein the characteristic parameters of the second plane includes a tilting angle.
- 5 7. The error measuring device of claim 1, wherein the characteristic parameters of the second plane includes a height.
8. The error measuring device of claim 1, wherein a first measuring part protrudes from the side of the referenced gauge toward the spindle motor for installing the first sensor.
9. The error measuring device of claim 1, wherein a second measuring part protrudes
10 from the side of the referenced gauge toward the guide rod actuated gauge for installing the second sensor.
10. The error measuring device of claim 1, wherein the referenced gauge stands freely on the optical pickup head guide rods by three contact points.
11. The error measuring device of claim 1, wherein the guide rod actuated gauge is
15 installed on the optical pickup head guide rods by three contact points.
12. An error measuring device for optical disk drive assembly to detect the assembly status of a spindle motor and two optical pickup head guide rods of an optical disk drive, the error measuring device comprising:
- a referenced gauge, which is installed on top of the spindle motor;
- 20 two gauges, including a first guide rod actuated gauge and a second guide rod actuated gauge, which stand freely on one side of the optical pickup head guide rods in a symmetric way, the first guide rod actuated gauge forming a first gauge plane and the second guide rod actuated gauge forming a second gauge plane;

at least one first sensor, which is installed on the side of the referenced gauge corresponding to the first gauge plane to measure the characteristic parameters of the first gauge plane; and

5 at least one second sensor, which are installed on the side of the referenced gauge corresponding to the second gauge plane to measure characteristic parameters of the second gauge plane.

13. The error measuring device of claim 12 further comprising a first calibration module, which receives feedback control signals from the first sensor to adjust the assembly status of the spindle motor.

10 14. The error measuring device of claim 12 further comprising a second calibration module, which receives feedback control signals from the second sensor to adjust the assembly status of the optical pickup head guide rods.

15. The error measuring device of claim 12, wherein the characteristic parameters of the first plane includes a tilting angle.

15 16. The error measuring device of claim 12, wherein the characteristic parameters of the first plane includes a height.

17. The error measuring device of claim 12, wherein the characteristic parameters of the second plane includes a tilting angle.

20 18. The error measuring device of claim 12, wherein the characteristic parameters of the second plane includes a height.

19. The error measuring device of claim 12, wherein a measuring arm protrudes from the referenced gauge toward the optical pickup head guide rods for installing the first sensor and the second sensor.

20. The error measuring device of claim 12, wherein each of the first guide rod actuated

gauge and the second guide rod actuated gauge is installed on the optical pickup head guide rods by three contact points.